MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES PROGRAM
Standard Operating Procedures

SOP #: MDNR-FSS-302 EFFECTIVE DATE: November 21, 2001

SOP TITLE: Procedures for Hazardous Waste Satellite Accumulation Areas

WRITTEN BY: Eric Sappington, Environmental Specialist IV, Field Services Section, ESP

APPROVED BY: Earl Pabst, Director, ESP

SUMMARY OF REVISIONS: Changes were made throughout the SOP to update the procedures that were written in 1994. An inspection form was added as Appendix A.

APPLICABILITY: The procedures described in this SOP apply to all ESP Chemical Analysis Section staff who work in labs where hazardous wastes are generated and stored. This SOP is also applicable to ESP staff who manage the storage and disposal of hazardous wastes at the ESP.

DISTRIBUTION: MoDNR Intranet
ESP FSS Section Chief
ESP SOP Coordinator
ESP CAS Section Chief and Unit Supervisors

RECERTIFICATION RECORD:

Date Reviewed				
Initials				

1.0 SCOPE AND APPLICATION

Hazardous waste satellite accumulation areas are locations at or near any point of generation where wastes initially accumulate which are under the control of the operator of the process generating the waste. Within the Environmental Services Program (ESP) building there are three satellite accumulation areas - Wet Chemistry Lab, Organic Prep Lab, and the Acid Digestion Lab. As conditions change at the ESP, other areas may be identified as satellite accumulation areas in the future. As a regulated Small Quantity Generator of hazardous waste, the ESP must follow certain procedures in management of its satellite accumulation areas. The procedures described in this Standard Operating Procedure (SOP) are applicable to those ESP staff who work in the labs where hazardous wastes are generated and temporarily stored (i.e., satellite accumulation areas) and also those who manage the storage and disposal of ESP-generated hazardous wastes. At the time this SOP was written, Eric Sappington was the ESP hazardous waste coordinator and thus responsible for management, storage and disposal of ESP-generated hazardous wastes.

2.0 HEALTH AND SAFETY REQUIREMENTS

2.1 The hazardous wastes that are generated in the ESP satellite accumulation areas fall into two general categories - corrosive liquids and flammable solvents. The ESP chemists who handle the corrosive and flammable chemicals that become hazardous wastes though analytical processes should be familiar with the hazards associated with those various chemicals and thus should be aware of the hazards associated with the wastes. Although the hazardous wastes do not have Material Safety Data Sheets (MSDS), there are MSDS available for the various chemicals that constitute the hazardous wastes. For specific information on chemical hazards, staff should read the MSDS associated with those chemicals being used.

2.2 The three satellite accumulation areas within the ESP are located in labs where the wearing of safety glasses is mandatory. When handling drums of hazardous waste (e.g., moving drums, opening drums, adding waste to drums) safety glasses and protective gloves should be worn. For additional splash protection, face shields are available for use in each lab area and lab coats should be worn to protect clothing.

2.3 A non-sparking bung wrench should be used when opening and closing the bungs on drums of flammable hazardous waste.

3.0 PERSONNEL QUALIFICATIONS

Personnel should be familiar with the procedures that are described in this SOP.

4.0 SUPPLIES AND EQUIPMENT

- Poly drums (55-gallon and 15-gallon)
- Metal drums (55-gallon)

- 6" x 6" Hazardous Waste labels
- 4" x 4" DOT labels (corrosive and flammable)

5.0 PROCEDURE

5.1 Empty drums that are to be used for storing bulk hazardous wastes in the satellite accumulation areas are purchased by the ESP hazardous waste coordinator and stored in the Hazcat Room. For satellite accumulation areas, hazardous waste regulations require that the drums be no larger than 55-gallon in size. When a new drum is delivered to one of the labs for waste storage, the ESP hazardous waste coordinator will ensure that the drum is properly marked with a Hazardous Waste label and appropriate DOT labels (the Hazardous Waste label should be affixed to the side of a drum in a prominent location, while two DOT labels should be affixed to opposite sides of a drum so that at least one DOT label can be seen from nearly any viewing angle).

5.2 All containers used for the accumulation and storage of hazardous waste must be labeled with the words "Hazardous Waste". The ESP purchases self-adhesive Hazardous Waste labels for use in marking drums and other containers of hazardous waste. The Hazardous Waste label should be affixed in a prominent location on the container and should be clearly legible. All information on the Hazardous Waste label should be completed, including the Accumulation Start Date. The Accumulation Start Date is the date that hazardous waste is first placed into a drum or storage container.

5.3 Storage containers must be constructed of a material that is compatible with the hazardous waste being stored. Corrosive liquids are typically stored in poly drums, while organic solvents are usually stored in metal drums. At the time this SOP was developed, the ESP had six types of liquid hazardous wastes that are generated in the three satellite accumulation areas and stored in drums. The six waste types are listed on the ESP Hazardous Waste Storage Inspection Form attached to this SOP as Appendix A.

5.4 All hazardous waste storage containers must be in good condition. The ESP purchases new drums for the satellite accumulation areas. If a container is found to be leaking, then the hazardous waste contained therein must be immediately overpacked or transferred to another storage container that does not leak. Spill kits are available in each lab for use in cleaning up small spills. The ESP Environmental Emergency Response staff should be contacted if any assistance is needed to clean up a chemical spill.

5.5 Hazardous waste storage containers must be kept closed during storage, except when it is necessary to add waste. The bungs should be at least finger-tight.

5.6 A full drum must be transferred from the satellite accumulation area to the hazardous waste storage area (Hazcat Room) within 3 days of being filled. In addition, all drums must be moved from a satellite accumulation area to the hazardous waste storage area

within one year of the accumulation start date, irrespective of the quantity of hazardous waste in the drum. While the weekly inspections discussed in Section 6.0 should identify any full drums in the satellite accumulation areas, any chemist who notices a full drum should contact the ESP hazardous waste coordinator as soon as possible so that it can be moved to the Hazcat Room for storage.

6.0 INSPECTIONS

The ESP hazardous waste coordinator will conduct weekly inspections of the satellite accumulation areas and Hazcat Room to help ensure compliance with this SOP and state and federal hazardous waste regulations. Completed inspection forms will be maintained in a file located in the Hazcat Room. The records will be retained for a period of one year. The ESP hazardous waste coordinator will address any deficiencies noted in the weekly inspections. Any deficiencies that appear to occur frequently will be brought to the attention of appropriate supervisory staff for corrective action.

7.0 REFERENCES

Title 40, Code of Federal Regulations, Part 262 (40 CFR Part 262), Standards Applicable to Generators of Hazardous Waste

Title 10, Missouri Code of State Regulations, Division 25, Chapter 5 (10 CSR 25-5), Rules Applicable to Generators of Hazardous Waste

Appendix A

ESP Hazardous Waste Storage Inspection Form

ESP Hazardous Waste Storage Inspection Form

Date of Inspection:_____ Name of Inspector:_____

Hazcat Room:

1. Record the number of drums in storage according to waste type:

   ____ TCLP (55-gal poly) ____ Lachet (15-gal poly) ____ 552 waste (15-gal poly)

   ____ Cyanide (15-gal poly) ____ COD (15-gal poly) ____ Org solvents (55-gal metal)

   ____ Other drums (describe: _____

2. Do all drums have Hazardous Waste and DOT labels? _____

3. What is the oldest accumulation start date recorded on the Haz Waste labels? _____

4. List generic types of non-bulk wastes in storage (checkmark all applicable categories):

   ____ mercury ____ batteries ____ organic vials

   ____ PCBs ____ flammables ____corrosives

   other:_____

5. Are all drums in good condition with bungs tightened? _____

6. Are there any problems observed (e.g., leaking or bulging drums)?

   _____

   _____

   If yes to above, what measures were taken to remedy the problem?

   _____

   _____

Wet Chemistry Lab:

1. How full are the waste drums (estimated %):

   ____ Lachet ____ Cyanide ____ Chloride/COD

2. Do all drums have Hazardous Waste and DOT labels? _____

Wet Chemistry Lab (cont.):

3. What is the oldest accumulation start date recorded on the Haz Waste labels? _____

4. Are all drums in good condition with bungs tightened? _____

5. Describe any problems observed and any remedial measures taken:
_____
_____
_____

Organic Prep Lab:

1. How full are the waste drums (estimated %):

   ___ Organic Solvents ___ Method 552

2. Do all drums have Hazardous Waste and DOT labels? _____

3. What is the oldest accumulation start date recorded on the Haz Waste labels? _____

4. Are all drums in good condition with bungs tightened? _____

5. Describe any problems observed and any remedial measures taken:
_____
_____
_____

Acid Digestion Lab:

1. How full are the waste drums (estimated %):

   ___ TCLP

2. Do all drums have Hazardous Waste and DOT labels? _____

3. What is the oldest accumulation start date recorded on the Haz Waste labels? _____

4. Are all drums in good condition with bungs tightened? _____

5. Describe any problems observed and any remedial measures taken:
_____
_____
_____